

Scaled data based on original data using  
LM-79-08 Approved Method: Electrical and Photometric Measurements of Solid-State  
Lighting Products

Test Report Prepared for

Cooper Lighting Solutions

(formerly Eaton)

Brand: FAIL-SAFE

Report Number: P545593

Luminaire Tested: **FMR-12-2-LD4-2HI-50-UNV-80-86-EDD**

Issue Date: 6/15/2021

This test was performed under the Supervised Manufacturer's Testing Program. The results of this test have not been influenced by sources from within Cooper Lighting Solutions or from external interests.



**Test Information**

Test Method: LM-79-08  
Report Number: P545593  
TEST IS SCALED FROM IESNA LM-79-08 TEST DATA (G3-2102-135-5)  
Test Lab: INNOVATION CENTER  
Issue Date: 6/15/2021  
Manufacturer: COOPER LIGHTING SOLUTIONS (FORMERLY EATON)  
Product Line: FAIL-SAFE  
Catalog Number: FMR-12-2-LD4-2HI-50-UNV-80-86-EDD  
Description: 1X2 FMR TROFFER WITH .125 PRISMATIC ACRYLIC FIXTURE SIDE AND .250 CLEAR PC ENVIRONMENTAL SIDE LENSES WITH, 90 CRI AND 5000K CCT LEDS  
Light Source: -  
Ballast/Driver: -

Luminaire Equipment: Sample No.   Condition   Description

**Summary**

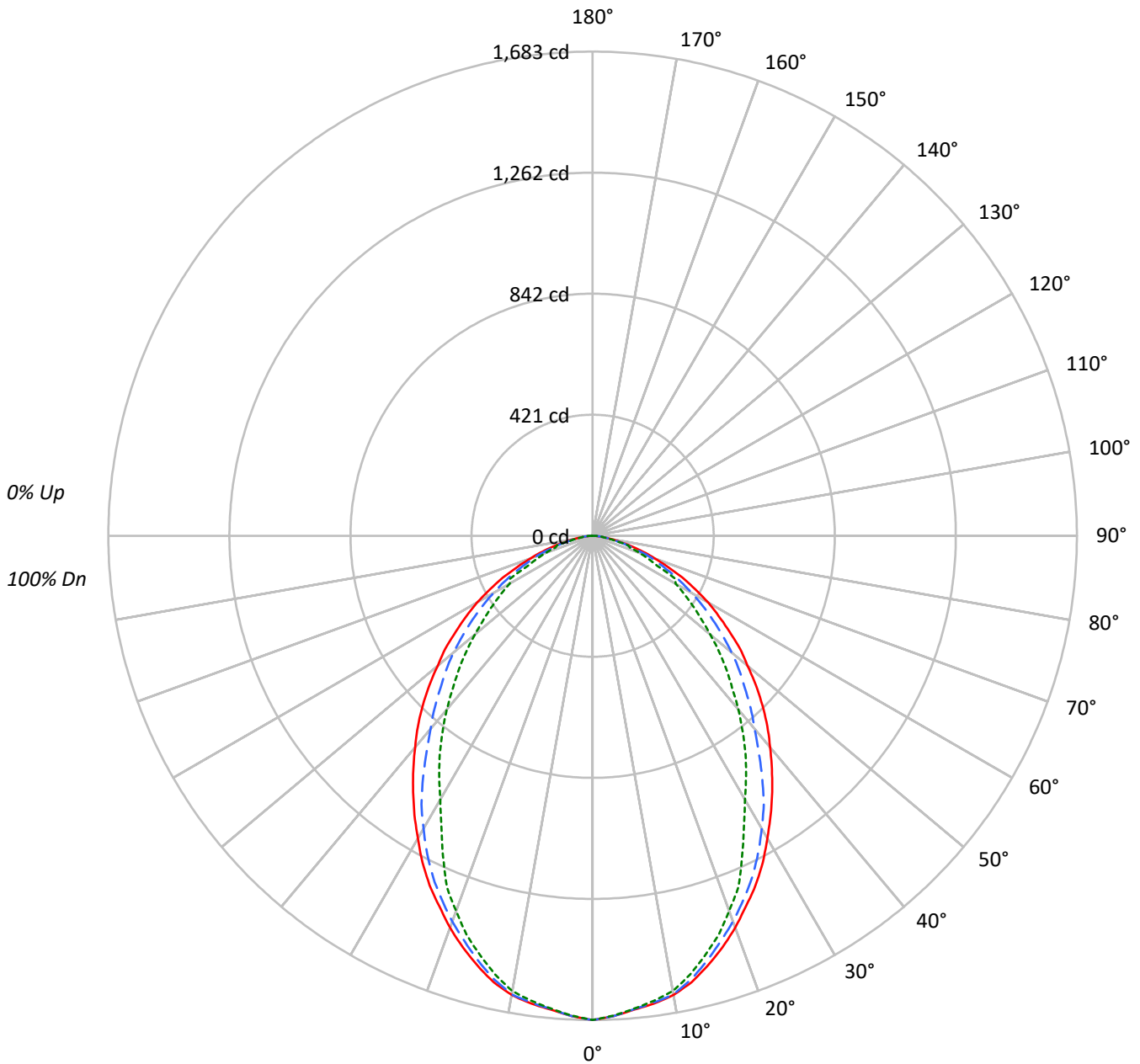
Lumens per Lamp: N/A  
Luminaire Lumens: 3304.0 lumens  
Efficiency: N/A  
Efficacy: 76.5 lumens/watt  
Spacing Criteria (0/90/45): 1.1 / 1 / 1.15  
Luminous Opening: Rectangular (W 1' x L: 2' x H: 0')  
CIE Type: Direct

Input Watts (W): 43.2  
Input Voltage (V): NR  
Input Current (Ain): NR  
Voltage Rise (V): NR  
Power Factor: NR  
Total Harmonic Distortion (THDi): NR  
Frequency (hertz): 60  
Stabilization Time: NR  
Operation Time: NR  
Ambient Temperature (°C): NR  
Test Distance: 25 FT

TEST NUMBER: P545593

CATALOG NUMBER: FMR-12-2-LD4-2HI-50-UNV-80-86-EDD

### Luminous Intensity Polar Plot





TEST NUMBER: P545593

CATALOG NUMBER: FMR-12-2-LD4-2HI-50-UNV-80-86-EDD

**COEFFICIENT OF UTILIZATION - ZONAL CAVITY METHOD:**

RF	20									20									20									20									
RC	80									50									30									10									0
RW	70	50	30	10	70	50	30	10	50	30	10	50	30	10	50	30	10	50	30	10	0																
RCR																																					
0	119	119	119	119	116	116	116	116	111	111	111	106	106	106	102	102	102	100																			
1	110	106	102	99	108	104	100	97	100	97	94	96	94	91	92	90	89	87																			
2	101	94	88	83	99	92	87	82	89	84	80	86	82	78	83	79	77	75																			
3	93	84	77	71	91	82	76	70	79	74	69	77	72	68	74	70	67	65																			
4	86	75	67	61	84	74	66	61	72	65	60	69	64	59	67	62	58	56																			
5	80	68	60	54	78	67	59	53	65	58	53	63	57	52	61	56	52	50																			
6	74	62	53	48	72	61	53	47	59	52	47	57	51	47	56	50	46	44																			
7	69	56	48	43	67	56	48	42	54	47	42	53	46	42	51	46	42	40																			
8	65	52	44	38	63	51	44	38	50	43	38	49	42	38	48	42	38	36																			
9	61	48	40	35	59	47	40	35	46	39	35	45	39	34	44	38	34	33																			
10	57	44	37	32	56	44	37	32	43	36	32	42	36	32	41	36	32	30																			

**AVERAGE LUMINANCE (cd/sqm):**

	0°	45°	90°
0°	9058	9058	9058
5°	8935	8924	8914
10°	8858	8847	8783
15°	8618	8532	8412
20°	8302	8168	7946
25°	7961	7788	7302
30°	7545	7303	6578
35°	7146	6750	6085
40°	6739	6152	5536
45°	6353	5686	5005
50°	5881	5278	4464
55°	5440	4784	3998
60°	4985	4272	3581
65°	4386	3741	3171
70°	3613	3276	2694
75°	2872	2508	2630
80°	1931	1810	1689
85°	1204	1439	1680



TEST NUMBER: P545593

CATALOG NUMBER: FMR-12-2-LD4-2HI-50-UNV-80-86-EDD

**ZONAL LUMENS:**

Zone	Lumens	% Fixture
0°-10°	156.7	4.7
10°-20°	430.0	13.0
20°-30°	595.3	18.0
30°-40°	634.7	19.2
40°-50°	579.0	17.5
50°-60°	453.6	13.7
60°-70°	295.7	8.9
70°-80°	131.0	4.0
80°-90°	28.1	0.9
90°-100°	0.0	0.0
100°-110°	0.0	0.0
110°-120°	0.0	0.0
120°-130°	0.0	0.0
130°-140°	0.0	0.0
140°-150°	0.0	0.0
150°-160°	0.0	0.0
160°-170°	0.0	0.0
170°-180°	0.0	0.0
0°-30°	1181.9	35.8
0°-40°	1816.6	55.0
0°-60°	2849.2	86.2
0°-90°	3304.0	100.0
90°-120°	0.0	0.0
90°-150°	0.0	0.0
90°-180°	0.0	0.0
0°-180°	3304.0	100.0

**CANDELA DISTRIBUTION:**

	0°	22.5°	45°	67.5°	90°	Flux
0°	1683	1683	1683	1683	1683	
5°	1654	1652	1652	1650	1650	157
15°	1547	1547	1531	1516	1510	435
25°	1341	1333	1311	1265	1230	615
35°	1088	1080	1027	950	926	680
45°	835	817	747	685	658	643
55°	580	562	510	450	426	520
65°	344	325	294	300	249	339
75°	138	128	121	115	126	148
85°	20	21	23	25	27	27
90°	0	0	0	0	0	



TEST NUMBER: P545593

CATALOG NUMBER: FMR-12-2-LD4-2HI-50-UNV-80-86-EDD

**CANDELA DISTRIBUTION (FULL):**

	0°	22.5°	45°	67.5°	90°
0°	1683.0	1683.0	1683.0	1683.0	1683.0
2.5°	1671.3	1671.3	1671.3	1669.4	1669.4
5°	1653.8	1651.9	1651.9	1649.9	1649.9
7.5°	1640.2	1638.3	1636.3	1634.4	1630.5
10°	1620.8	1620.8	1618.8	1609.1	1607.1
12.5°	1589.6	1587.7	1579.9	1566.3	1562.4
15°	1546.8	1546.8	1531.3	1515.7	1509.8
17.5°	1500.1	1498.2	1478.7	1463.2	1455.4
20°	1449.5	1445.6	1426.2	1400.9	1387.3
22.5°	1393.1	1393.1	1369.8	1336.7	1323.1
25°	1340.6	1332.8	1311.4	1264.7	1229.7
27.5°	1280.3	1268.6	1245.2	1179.1	1138.2
30°	1214.1	1208.3	1175.2	1089.6	1058.5
32.5°	1151.8	1142.1	1107.1	1017.6	992.3
35°	1087.6	1079.9	1027.3	949.5	926.1
37.5°	1023.4	1013.7	947.5	885.3	856.1
40°	959.2	947.5	875.6	819.1	788.0
42.5°	898.9	883.3	813.3	753.0	718.0
45°	834.7	817.2	747.1	684.9	657.6
47.5°	770.5	754.9	690.7	626.5	595.4
50°	702.4	688.8	630.4	566.2	533.1
52.5°	646.0	624.6	568.1	503.9	476.7
55°	579.8	562.3	509.8	449.5	426.1
57.5°	519.5	502.0	453.3	396.9	377.5
60°	463.1	437.8	396.9	348.3	332.7
62.5°	400.8	381.4	346.3	305.5	324.9
65°	344.4	324.9	293.8	299.6	249.0
67.5°	282.1	272.4	245.2	217.9	210.1
70°	229.6	217.9	208.2	179.0	171.2
72.5°	182.9	171.2	157.6	142.0	136.2
75°	138.1	128.4	120.6	114.8	126.5
77.5°	95.3	91.4	85.6	79.8	77.8
80°	62.3	60.3	58.4	56.4	54.5
82.5°	37.0	37.0	37.0	37.0	37.0
85°	19.5	21.4	23.3	25.3	27.2
87.5°	11.7	11.7	13.6	15.6	17.5
90°	0.0	0.0	0.0	0.0	0.0



Report Generated By 670246072 / DESKTOP-MV3F9LC







— 0°-180°    - - 45°-225°    - - - - 90°-270°







(END OF REPORT)